

PCT Appl. No. PCT/DE03/00582

This listing of claims will replace all prior versions, and listings, of claims in the application

LISTING OF CLAIMS

1-12. (cancelled).

5 13. (new) A transceiver device configured for generating an oscillator signal based on a base signal, comprising:

an input configured for receiving the base signal;

an output configured for transmitting the oscillator signal generated;

10 an oscillator configured for actively constructing the oscillator signal with oscillations, the oscillator configured to be activated in a quasi-phase-coherent manner aided by a control signal generated by a clock generator and configured to be activated in a quasi-phase-coherent manner with respect to the base signal via the base signal for generating the oscillator signal;

15 the device being usable as a receiver if the oscillator is not modulated by the clock generator, and the device being usable as a transmitter if the oscillator is modulated by the clock generator in its quasi-phase-coherent activation capability and in at least one of its amplitude, phase, and frequency.

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14. (new) A transceiver device as claimed in claim 13, further comprising:
data insertion apparatus comprising a phase control apparatus configured to modulate data onto the oscillator signal by using a switchable phase shift.

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15. (new) A transceiver device as claimed in claim 13, further comprising:

an oscillator configured for generating an oscillating signal;
a mixer comprising an input to which the oscillating signal of the oscillator
is applied;
at least one interface configured for at least one of transmitting and
5 receiving signals, the interface being connected to the mixer;
at least one output of the mixer configured for outputting a signal received
from the at least one interface and mixed down with the oscillating
signal; and
a signal and data processing apparatus connected to the mixer;
10 the clock generator being configured for activating the oscillator.

16. (new) The transceiver device according to claim 15, wherein the
signal and data processing apparatus is configured to either:

15 apply a received base signal to the oscillator and insert data or a data
signal into the oscillating signal for subsequent output via the
interface as data insertion apparatus; or
recover the inserted data from a signal received via the interface and
mixed down by way of the mixer as the data recovery apparatus

20 17. (new) A receiver device configured for receiving and processing a
quasi-phase-coherent received signal which was generated and transmitted by a
device of claim 14, comprising:

25 a separation apparatus configured for removing signal components of an
oscillator from the quasi-phase-coherent received signal by using a
base signal of a receiver-side oscillator; and
a data recovery apparatus configured to recover inserted data.

18. (new) A receiver device as claimed in claim 17, further comprising:

a transmission mixer comprising:

an oscillator input configured for applying the signal generated by the oscillator;

5 a base signal output configured for outputting the signal generated by the oscillator as a base signal through the transmission mixer and for transmitting the base signal to an actual data transmitter station;

a received signal input configured for applying the received signal; and

10 a mixed-down signal output configured for outputting a mixed-down received signal, where the base signal output for and the received signal input coincide.

19. (new) A demodulator for the receiver device of claim 17, comprising:

a phase comparator, comprising:

15 an input to which a received signal originating from the mixer of the receiver is fed;

a further input; and

an output at which recovered data is output;

the demodulator further comprising:

20 a frequency discriminator configured to impose a frequency-dependent phase shift on an input signal, comprising:

an input to which the received signal originating from the mixer of the receiver is fed; and

25 an output connected to the further input of the phase comparator at which an output signal of the frequency discriminator is fed.

20. (new) A demodulator for the receiver device of claim 17, comprising:
at least one phase-coupled control-loop circuit for frequency
demodulation.

5 21. (new) A demodulator for the receiver device of claim 17, comprising:
at least two different bandpass filter / detector sequences having outputs
that are applied to both an adder for outputting a measure for the
signal level and also a differential amplifier followed by a series-
connected comparator for outputting reconstructed data.

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22. (new) A transponder system, comprising:

at least one transmitter;

at least one receiver;

the transponder system configured to determine a distance between the

15 transmitter and the receiver by using a base signal transmitted from
the receiver to the transmitter and a signal transmitted back from
the transmitter to the receiver which is quasi-phase-coherent with
respect to the base signal,

at least one of the following being provided in the transmitter or the

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receiver:

a data insertion apparatus which is adapted for inserting data or a data
signal into a corresponding oscillator signal to be transmitted; and

a data recovery apparatus configured to recover data inserted into
received signals.

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23. (new) A transponder system as claimed in claim 22, wherein the
receiver further comprises:

a demodulator configured to recover original data;
a measuring apparatus configured to determine the distance between the transmitter and the receiver;
an oscillator comprising a variable oscillator with regard to frequency, with
5 which frequency-modulated signals suitable for measuring distance are capable of being generated; and
a receiver mixer which is configured to mix received signals with signals of the oscillator and which comprises an output for outputting signals resulting therefrom, the output being connected to the demodulator
10 and the measuring apparatus.

24. (new) A method for transmitting data, comprising:
generating an oscillator signal based on a base signal;
activating an oscillator in a quasi-phase-coherent manner with respect to
15 the base signal by way of the base signal;
oscillating the oscillator in response to the activation, the oscillator actively generating a quasi-phase-coherent oscillator signal to be transmitted by way of the oscillation; and
inserting data or a data signal in the quasi-phase-coherent oscillator signal
20 to be transmitted during or following its generation.

25. (new) A method for transmitting data with a device for generating an oscillator signal based on a base signal, comprising:
actively constructing an oscillator signal with an oscillator configured to
25 actively constructing the oscillator signal by way of oscillations;
inputting the base signal at an input;
outputting the oscillator signal at an output;

generating a control signal by a clock generator;
activating the oscillator in a quasi-phase-coherent manner with the aid of
the control signal with respect to the base signal by way of the base
signal for generating the oscillator signal; and
5 switching the device between use as a receiver and as a transmitter;
when the device is used as a receiver, not modulating the oscillator by the
clock generator; and
when the device is used as a transmitter, modulating the oscillator by the
clock generator in its quasi-phase-coherent activation capability
10 and in at least one of its amplitude, phase, and frequency.